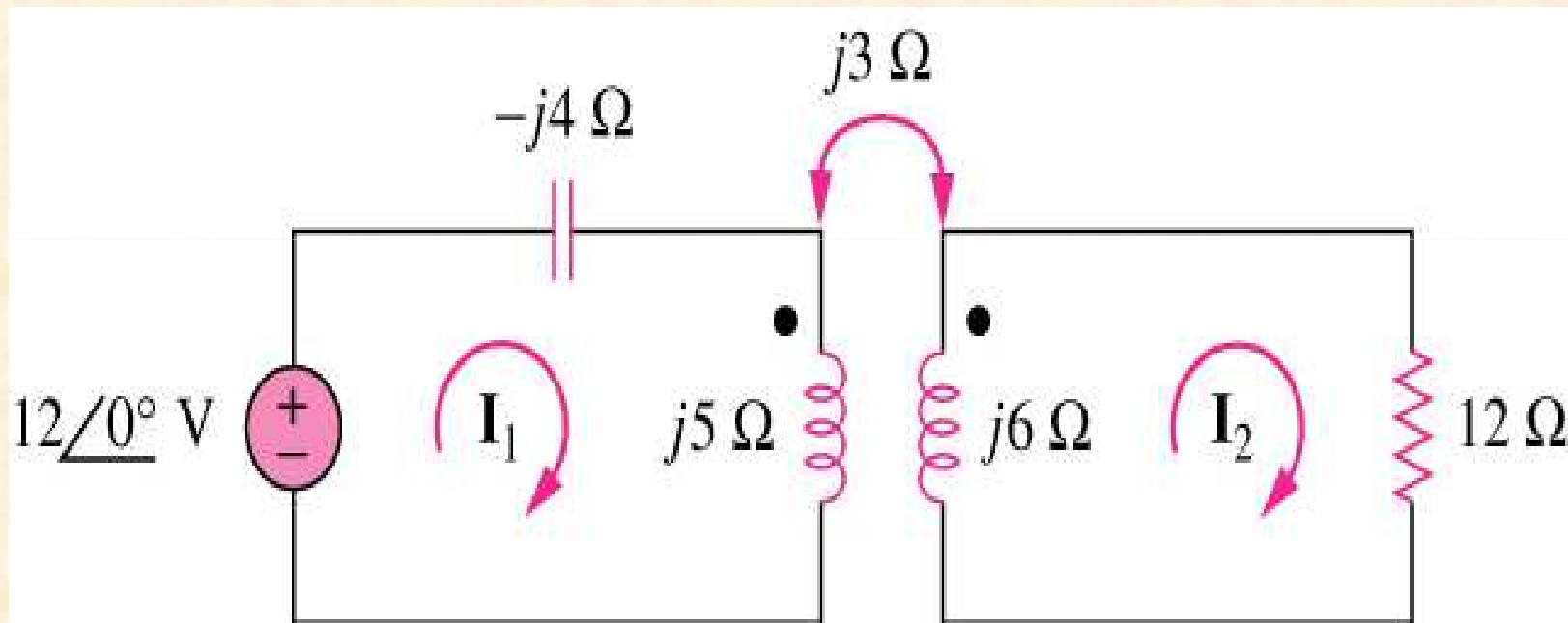
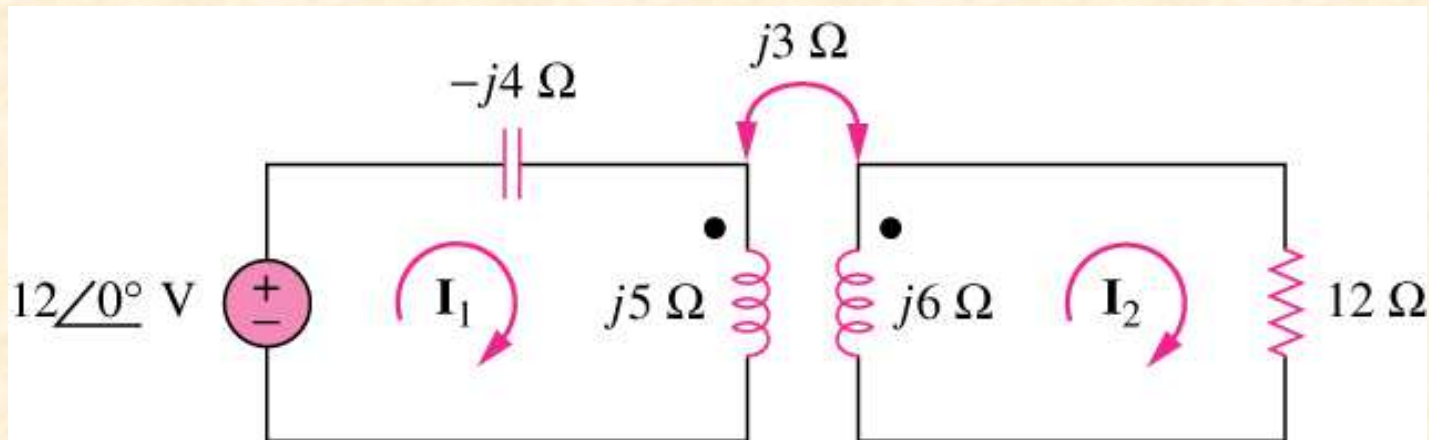


➤ Example (3)

- Write a set of mesh equations that describe the circuit shown in terms of i_1 and i_2



➤ Example (3)



Applying KVL to mesh 1 gives

$$-12 + (-j4 + j5)\mathbf{I}_1 - \underline{j3\mathbf{I}_2} = 0 \quad (1)$$

Applying KVL to mesh 2 gives

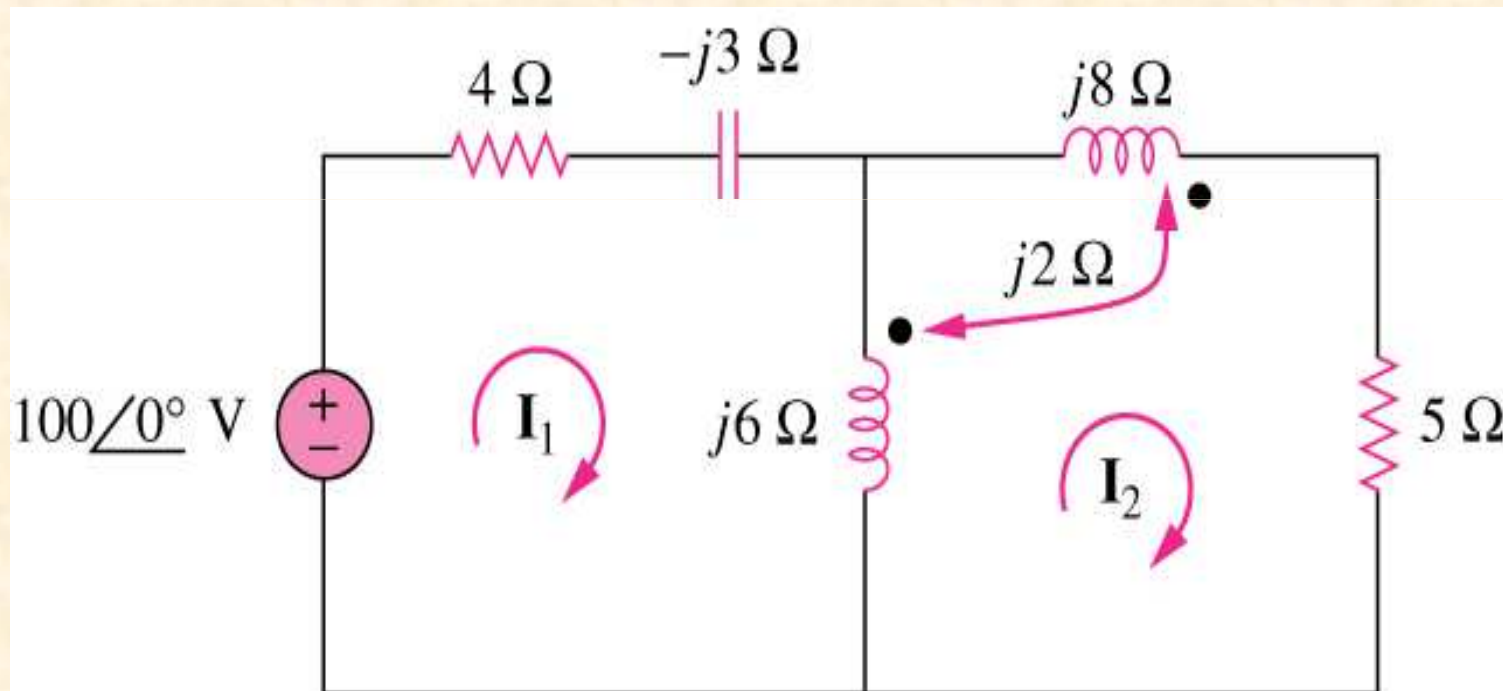
$$- \underline{j3\mathbf{I}_1} + (12 + j6)\mathbf{I}_2 = 0$$

$$\mathbf{I}_1 = \frac{12 + j6}{j3} \mathbf{I}_2 = (2 - j4)\mathbf{I}_2 \quad (2)$$

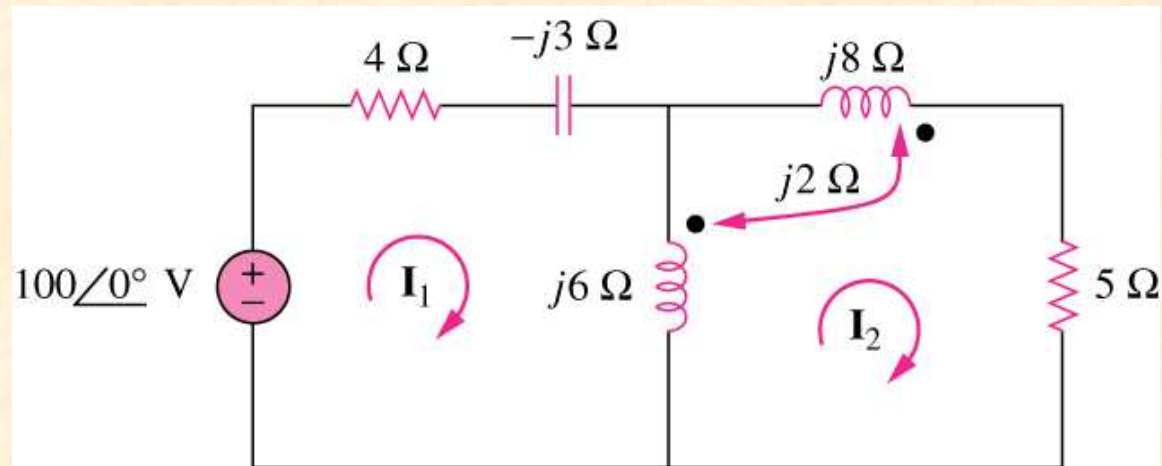


➤ Example (4)

- Write a set of mesh equations that describe the circuit shown in terms of i_1 and i_2



➤ Example (4)



Applying KVL to mesh 1 gives

$$-100 + (4 - j3 + j6)I_1 - j6I_2 - \underline{j2I_2} = 0$$

$$\Rightarrow 100 = (4 + j3)I_1 - j8I_2 = 100 \quad (1)$$

Applying KVL to mesh 2 gives

$$-j6I_1 - \underline{j2I_1} + (j6 + j8 + \underline{j2 \times 2} + 5)I_2 = 0$$

$$\Rightarrow -j8I_1 + (5 + j18)I_2 = 0 \quad (2)$$

